

NUCLEAR DIVISION NEWS

UNION
CARBIDE

A Newspaper for Employees of the Nuclear Division, Union Carbide Corporation

Vol. 3 — No. 1

Thursday, January 6, 1972

'Outlook for '72 Bright'

F. Perry Wilson, chairman of the board of Union Carbide Corporation, said in a year end statement that present indications point to an improvement in the U. S. economy in 1972 and, if this materializes, Union Carbide would expect to achieve a moderate increase of approximately five per cent in domestic sales, with international sales somewhat better. He stated that an economic upturn is one of the most important elements needed to improve Union Carbide's business, which has recently been markedly affected by depressed conditions in the industrial sector of the domestic economy.

Wilson stated that Union Carbide's capital expenditures for 1972 will probably be between \$300 and \$325 million. This represents a reduction of approximately \$50 million from 1971, reflecting substantial completion of the current expansion program at the corporation's major petrochemical complex in Ponce, Puerto Rico. Research and development expenditures in 1972 are expected to be about \$5 million less than the approximately \$77 million spent in 1971.

Commenting on the economy in general, Wilson said that he be-

lieves the inflationary trend will in fact be modified, that personal income will continue at a high level, and consumer confidence is returning as evidenced by the recent upturn in consumer sales.

Wilson emphasized that people on all fronts were beginning to realize the seriousness of the competitive situation facing the United States worldwide and that purely monetary and credit controls had not been effective in holding the wage-price spiral or in providing additional employment. He further stated that actions taken by the administration were essential steps toward the improvement of the United States balance of payment situation as well as its overseas bargaining position.

He commented that the institution of wage and price controls was timely and essential, emphasizing that adherence to the guidelines will be a major factor in improving the overall health of the nation. He said he was confident that voluntary compliance could be achieved provided the wage and price boards address the problems with firmness and coordination of their decisions so that restraints are equitably applied.

Robert J. Hart Named Manager, AEC-ORO; Sam R. Sapirie Sets Retirement February 19

Robert J. Hart has been appointed Manager of the Atomic Energy Commission's Oak Ridge Operations Office in Oak Ridge.

Hart has been deputy manager of the Richland Operations Office in Richland, Wash., since May 1, 1968. He will succeed S. R. Sapirie who will retire on February 19, 1972, after serving as Manager at Oak Ridge for 21 years. Hart's appointment will be effective at the time of Sapirie's retirement.

Before going to Richland as Deputy Manager in 1968, Hart had served since 1953 at AEC Headquarters in Washington, D. C., with the exception of a short period of time in 1954-55 with private industry. He started with AEC in 1948 as a management trainee at Oak Ridge. He left Oak Ridge in 1950 to go to the AEC Savannah River Plant in South Carolina, and joined the AEC Headquarters staff in 1953.

In 1961 he was assigned to the Division of Contracts and served as a senior contract specialist and assistant director for operations before being named deputy director in March of 1965.

Hart received a degree in poli-



Robert J. Hart



Sam R. Sapirie

tical science from Colgate University in 1948 and also did undergraduate work in science and engineering at Cornell University and Montana State College. He is married to the former Barbara Clines of Ithaca, N. Y., and has four children. His mother, Mrs. Margaret C. Hart, lives in Oak Ridge.

The Oak Ridge Operations Office is one of the Commission's major field offices with responsibility for operations in plants and laboratories located in four states and Puerto Rico, having a plant investment of three and one-half billion dollars. The Oak Ridge operation was part of the Manhattan Engineer District established during World War II and became an AEC field office soon after the Commission was established on January 1, 1947.

As Manager of the Oak Ridge Operations Office, Hart will have responsibility for programs involving the production of special nuclear materials, including uranium enrichment and other related activities, and the administration of research and development and training programs under the direction of AEC Headquarters. The latter includes programs in biology and medicine, isotopes development, physical research, reactor development and technology, space nuclear systems and nuclear education and training.

The Oak Ridge office also supervises Area Offices at Cincinnati, Ohio; New Brunswick, N. J.; Paducah, Ky.; Portsmouth, Ohio; and San Juan, Puerto Rico.

Sam R. Sapirie's career started with the federal government 39 years ago with the U. S. Forest Service.

In 1955 he received the National Civil Service League Career Service Award and in 1957 the AEC's Distinguished Service Award, the highest recognition the Commission can bestow on an employee.

He has held top administrative positions in the atomic energy program since 1946, and has been manager of Oak Ridge Operations, the AEC's largest field office, since February 18, 1951. When he retires next month, he will have served as manager of ORO for 21 years.

Early Ridge Resident

During World War II, Sapirie spent two years in Canada and Alaska directing various engineering and construction programs for

the Army Corps of Engineers. He came to Oak Ridge in 1946 as assistant director of operations for the Manhattan District, and transferred to the AEC when the Commission took over the program in January, 1947. Before being appointed manager, Sapirie served as director of production and engineering, then deputy manager of ORO.

Sapirie was graduated from Purdue University with a BS in civil engineering and received the civil engineering degree from that university in 1942, and was awarded an honorary doctor of engineering degree by Purdue in 1958. He is an honorary member of the Oak Ridge Rotary Club and the Oak Ridge Junior Chamber of Commerce.

Son Serves WHO

The Sapiries live at 100 Ogden Circle, Oak Ridge. They have two children, Steve Sapirie, who is with the World Health Organization in Geneva, Switzerland; and Mrs. Sally Ragan Word, Dallas, Tex. Mrs. Word is a school teacher and her husband is an architect with a Dallas firm.

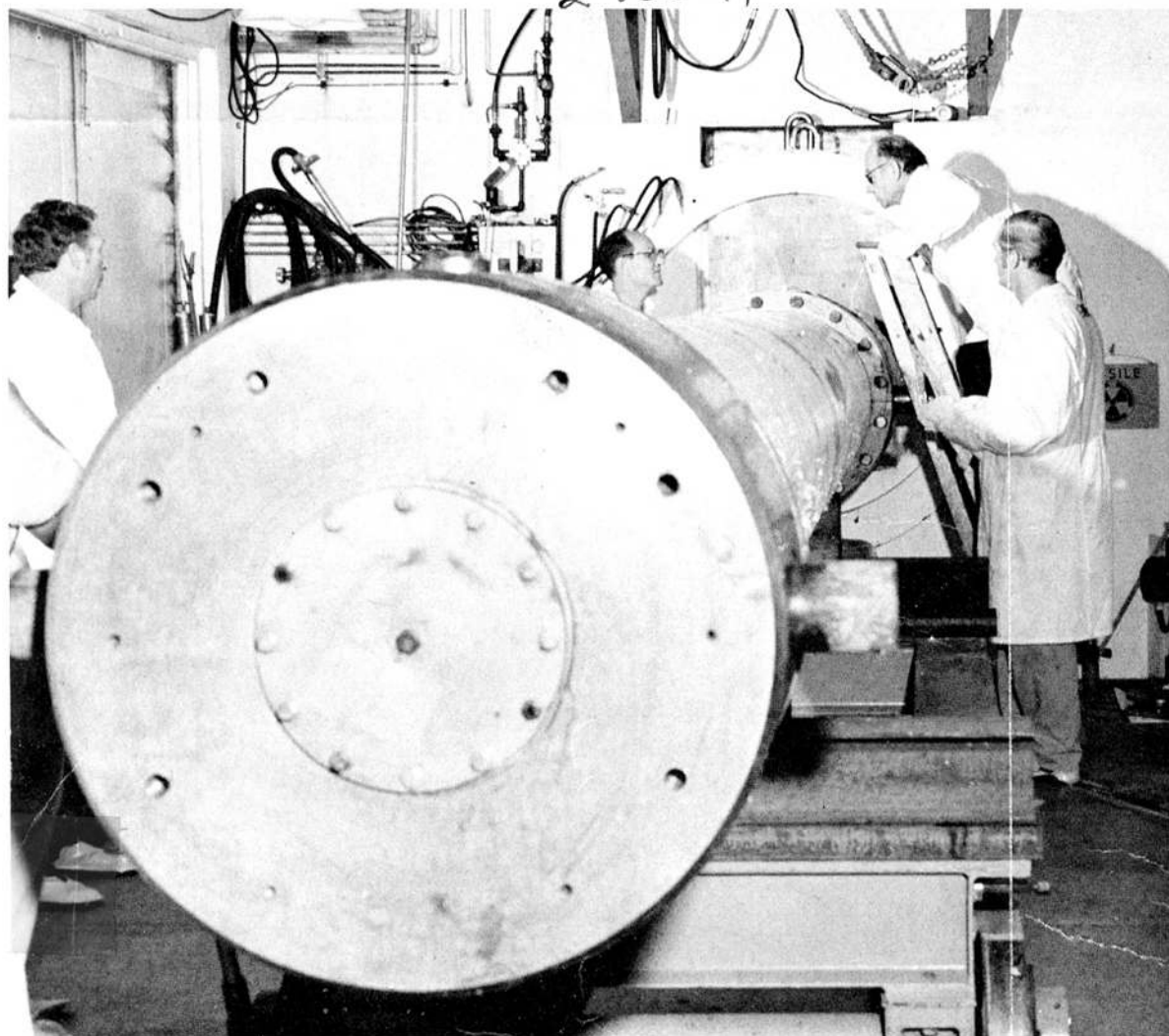
James R. Schlesinger, chairman of the Atomic Energy Commission made the following statement for Sapirie's retirement:

"The retirement of Sam Sapirie from the Atomic Energy Commission is a loss that will be felt not only by the Commission, but by the Federal Government as a whole. There are few men who have dedicated themselves so completely to the fulfillment of a successful career in civil service.

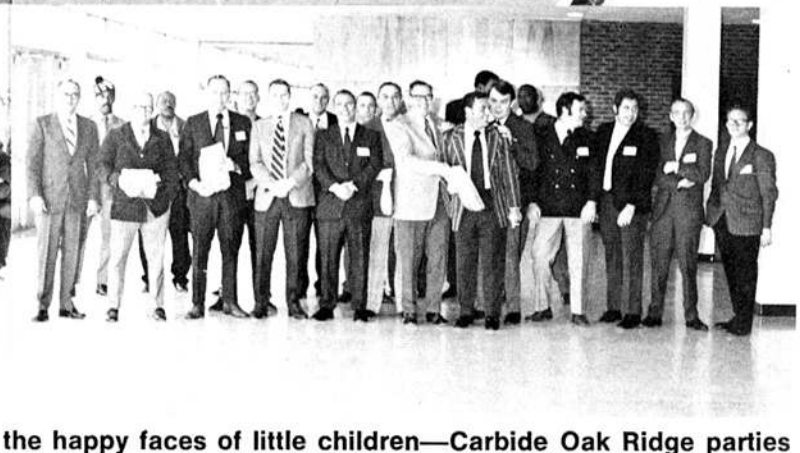
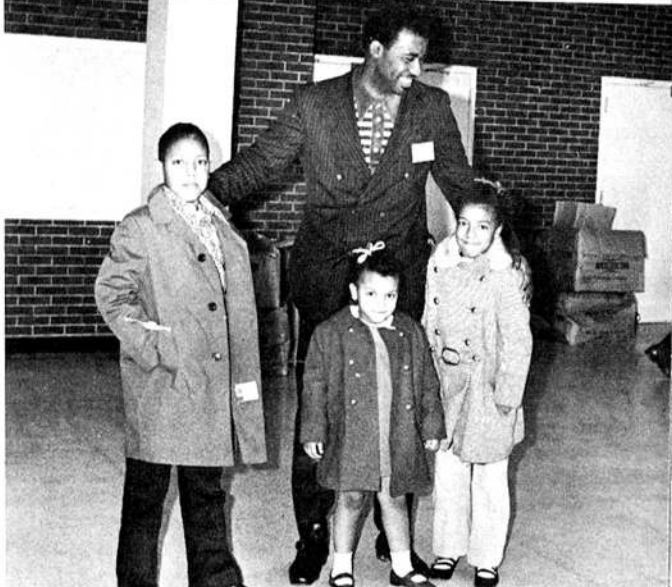
"Although I have known Sam for only a few months of his 25 years of service with the AEC, his character is clearly demonstrated through the profound respect by which he is held by top management throughout the AEC.

"His firm leadership and effective management skills have been evident throughout his 21-year tenure as Manager of Oak Ridge Operations, but particularly during the first major expansion of the gaseous diffusion plants in the early 1950's, and then again today as we have begun the current program to increase uranium enrichment production capacity.

"When Sam Sapirie completes 39 years of service with the Federal Government in February, he will leave with the best wishes of many friends and associates who will always respect his exemplary career."

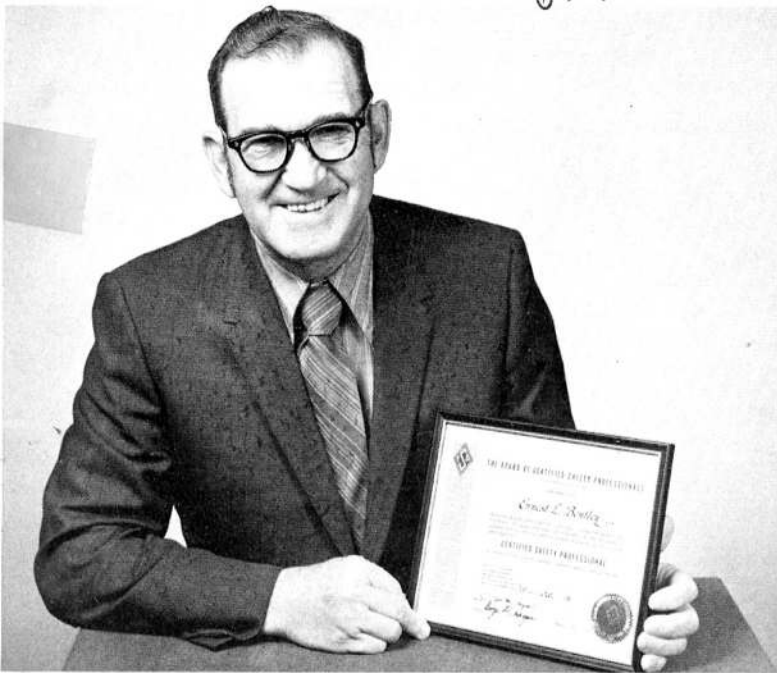


REMOVING THE FUEL—A 25-ton cylinder of radioactive test fuel from the Peach Bottom Atomic Power Station at Delta, Pa., which was involved in a single truck wreck en route to ORNL, is now undergoing tests at several ORNL facilities. The cylinder was moved to ORNL a few hours after the December 8 accident at Clinton, which killed the truck driver and threw the shipping cask several yards from the wreck. The steel-encased lead shipping cask measuring 24½ inches in diameter by 17-feet-long sustained damage only to the two-inch blanket of thermal insulation on the exterior of the cask. The fuel capsule and test element were not damaged and no radiation leaked from the cask. The test element measuring 3½ inches in diameter by 12-feet-long contained microspheres of uranium-thorium compounds. Tests are now being conducted on the fuel by Metals and Ceramics Division at HRLEL and by Chem Tech Division at 4507. Following complete examination of the shipping cask by Chem Tech Division at the TURF Facility, it will be fitted with a permanent thermal shield and installed on a tractor-trailer designed for the cask. Then it will be returned to service.



Christmas is the happy faces of little children—Carbide Oak Ridge parties

6-19120



ANOTHER CERTIFICATION—Ernest L. Bentley, a veteran in Y-12's Safety Department, becomes the second member of that department to be certified as a "safety professional." The certification, issued by the Board of Certified Safety Professionals of the Americas, Inc., reads "In recognition of E. L. Bentley who utilizes the expertise derived from a knowledge of the various sciences and professional experience to create or develop procedures, processes, standards, specifications and systems to achieve an optimal control or reduction of the hazards and exposures which are detrimental to people and/or property by the utilization of analysis, synthesis, investigation, evaluation, research, planning design and consultation."

Paul Barker's Rites Are Held in Virginia

Paul G. Barker, Research Services, died December 15, after a three month illness.

The Barker home is at 160 Louisiana Avenue, Oak Ridge, where his wife Mrs. Anna Cole Barker, and two sons, Gene and Eddie, and three daughters, Betty Anne, Patricia and Stella, survive. Another son, Wayne Barker, also lives in Oak Ridge. There are three brothers, W. E. Barker, Clinton; Jimmy, Arlington, Va., and Charles, Fayetteville, N. C.; sisters Mary Ray Tate of Big Stone Gap, Va., and Mrs. Wilson Sykes, Norfolk, Va.

Mr. Barker was born in Big Stone Gap, Va., and came to work with the Oak Ridge Gaseous Diffusion Plant in 1952. Later he went to work for the Tennessee Valley Authority. He served with the U. S. Navy during World War II.

Funeral services were held at the Holden Funeral Home, Big Stone Gap, with burial in the East Stone Gap Cemetery.

Ride Wanted

Ride wanted, or will join car pool, from The University of Tennessee area, Knoxville, to West Portal, straight day. W. R. Lacey, field, plant phone 3-7193, home phone Knoxville 546-6855.

Y-12 Credit Union Sets Annual Meet January 27

Y-12's Credit Union will hold its annual meeting, Thursday, January 27. The meeting is set for 7:30 p.m. at Robertsville Junior High School, Oak Ridge.

Three members of the board are to be named, as well as one



Mrs. Joseph Iezzi

Blevins' Daughter Wed At Beaver Dam Church

The marriage of Miss Betty Blevins to Mr. Joseph Iezzi was solemnized recently at the Beaver Dam Baptist Church, Knoxville. The Rev. Jerry Hayner officiated.

The bride is the daughter of Mr. and Mrs. William D. Blevins, 3225 Kenilworth Lane, Knoxville; and the bridegroom is the son of Mr. and Mrs. Joseph Iezzi, Philadelphia, Pa. The father of the bride is in Y-12's Maintenance Division.

Mrs. Bill Catlett was her sister's only attendant, and Bill Catlett was best man.

A reception honored the couple at the bride's home after the rites.

After a wedding trip to the Bahamas, the couple is living in Knoxville.

member of the credit committee.

Several door prizes will be awarded attendants at the annual meeting.

Unclassified Papers Written by Y-12ers Available to Public

Following is a list of unclassified Oak Ridge Y-12 Plant documents, published the latter part of 1971, which are publicly available through the National Technical Information Service in Washington, D. C. They are available to Nuclear Division personnel upon request to Y-12 Central Files, Building 9711-5.

Y-1784, "Fabrication of Discontinuous, High-Fiber Content, Isotropic Carbon-Carbon Composites," F. Lambdikin, J. L. Cook.

Y-1790, "Properties of Carbon Derived from Indene Compounds," W. E. Smith, O. J. Horne, Jr., B. Napier, Jr., E. A. Larson, W. L. Harper.

Y-1793, "An Eddy-Current Distance Gage for Precise Static Measurements," J. F. Ellis.

Y-1798, "Energy Redistribution in an Ultrasonic Beam Reflected at a Liquid-Solid Interface," J. H. Smith.

Y-1799, "Mesophase Formation in Polymers of Cinnamylideneindene and Acenaphthalene," O. J. Horne, Jr.

Y-1800, "Oxidation Properties of Two Uranium Alloys (U-16.6 At % Nb-5.6 At % Zr and U-21 At % Nb)," J. V. Cathcart, R. E. Pawel, G. F. Petersen, (all are ORNL members).

Y-1801, "Evaluation of Multi-level Sprinkler Systems and Container Materials for Fire Protection in High-Rack Storage," W. G. Butturini, J. R. Demonbrun, J. W. McCormick, L. M. McLaughlin, W. E. Weathersby.

Y-1802, "Monte Carlo Modeling and Fortran Simulation of a Compton Backscatter Thickness Gage," C. M. Davenport.

Y-CDC-8, "Use of Borosilicate Glass Raschig Rings as a Neutron Absorber in Solutions of Fissile Material," J. P. Nichols (ORNL), C. L. Schuske (Rocky Flats), D. W. Magnuson.

Y-DA-4214, "An Instrument for the Determination of Hydrogen in Metals," G. L. Powell, J. B. Condon, R. A. Strehlow.

Y-DD-98, "The Use of Automa-

Oak Ridge Y-12 Plant

Y-12 Plant Editor James A. Young
extension 3-7100

143372



Roy L. Huddleston

Engineering Mechanics Ph.D. Given Huddleston

Roy L. Huddleston, an engineer in Y-12's Materials Engineering, Development Division, has been awarded a Ph.D. degree in engineering mechanics from The University of Tennessee.

Huddleston authored a doctoral thesis entitled "Optimization of Multilayer Thick-Walled Cylinders with Simultaneous Internal Pressure and Radial Temperature Gradient."

A native of Crossville, Huddleston lives at 10024 El Pinar Drive, Concord. His wife is the former Charlotte M. Thomas.

tion and Computerization in the Oak Ridge Y-12 Plant's Environmental Monitoring Program," C. M. West, L. M. Scott.

Y-DD-100, "Methods Used to Calculate Package Criticality Safety," W. T. Mee.

Y-IA-92, "Primary Frequency Standards in the Y-12 Physical and Electrical Standard Laboratory," R. F. Wolny.

Security's Fisher Dies At Knoxville Residence

Arthur J. (Jack) Fisher, Jr. died December 20 from an apparent heart attack. Mr. Fisher was a supervisor in Y-12's Security Department. He came with Union Carbide March 10, 1952, after serving as assistant field executive of the Great Smoky Mountain Boy Scouts. He was a native of Walland, Tenn.



Mr. Fisher

Survivors include his wife Mrs. Emily Fisher, Knoxville; sons, Phillip N. Fisher, Powell; Thomas J. Fisher, San Jose, Calif.; step-sons, Sam Colville, Kansas City; Charles Colville, Indianlantic, Fla.; nine grandchildren; sisters, Miss Dorothy Fisher and Mrs. Charlotte Ransom, Maryville; and brother, John W. Fisher, Muncie, Ind.

Funeral services were held at the McCammon-Ammons Chapel, with Dr. Paul E. Brown and the Rev. Harold Harris officiating. Interment followed in Grandview Cemetery.

SAFETY SCOREBOARD

The Y-12 Plant Has
Operated
75 Days Or
2,613,000 Man-Hours
(Unofficial Estimate)
Through January 2
Without A Disabling Injury
SAFETY AT HOME,
AT WORK, AT PLAY



HONOR FBI HEAD—Don R. Carr, right, recently accompanied a delegation to J. Edgar Hoover's office to present a plaque to the FBI director in recognition of Hoover's contribution to the promotion of patriotism. The plaque came from the Seymour Optimist Club, which Carr heads. From left are Jerry W. Davis, Congressman John J. Duncan, Clyde R. Woods, Hoover, Mrs. Duncan, Mrs. Frances Light congressional secretary to James H. Quillen, Mrs. Light, and Carr. Carr is in Y-12's Gage Certification Laboratory.

Paducah Gaseous Diffusion Plant

Paducah Editor Keith Bryant
extension 369

From a Woman's Viewpoint

A cardinal principle in all forms of medicine is—First Do No Harm. Nurses should be capable of exercising good nursing judgment and asking for help when the problem is beyond their scope. In a recent issue of the *A. A. I. N. Journal* it was noted that a nurse should know enough about first aid to teach it effectively, and added; don't have the patient reciting this poem given to an unskilled, untrained first aider during World War II:

Lady, if you see me lying—on the ground
I may be dying,
Let my gore run—bright and free;
Don't attempt to bandage me.
While there's life, there's hope—so pet
Don't apply a tourniquet.
Do not give for my salvation
Artificial respiration.
Do not stretch my bones or joints
Do not press my pressure points.
If queer symptoms you should see,
Don't experiment on me.
If you want to be busy—pray
Help to keep the crowd away!
So, whatever my condition
Phone at once for my physician.
Let me lie, I'll take a chance
Waiting for an ambulance.
From First Aid I beg release,
Lady, let me die in peace.

Red Cross first-aiders learn that first aid is given immediately and then a physician is called. At a recent traffic accident in Houston, a man had stopped and was leaning over the victim. Suddenly a woman rushed up, shouldered him aside and announced that she was a first-aid. A little non-plussed, the man stepped back and watched for a few seconds. Then he leaned over and tapped the woman on the shoulder. "When you get to the part about calling a doctor," he said, "I'm already here."

H. E. Housman, R.N.

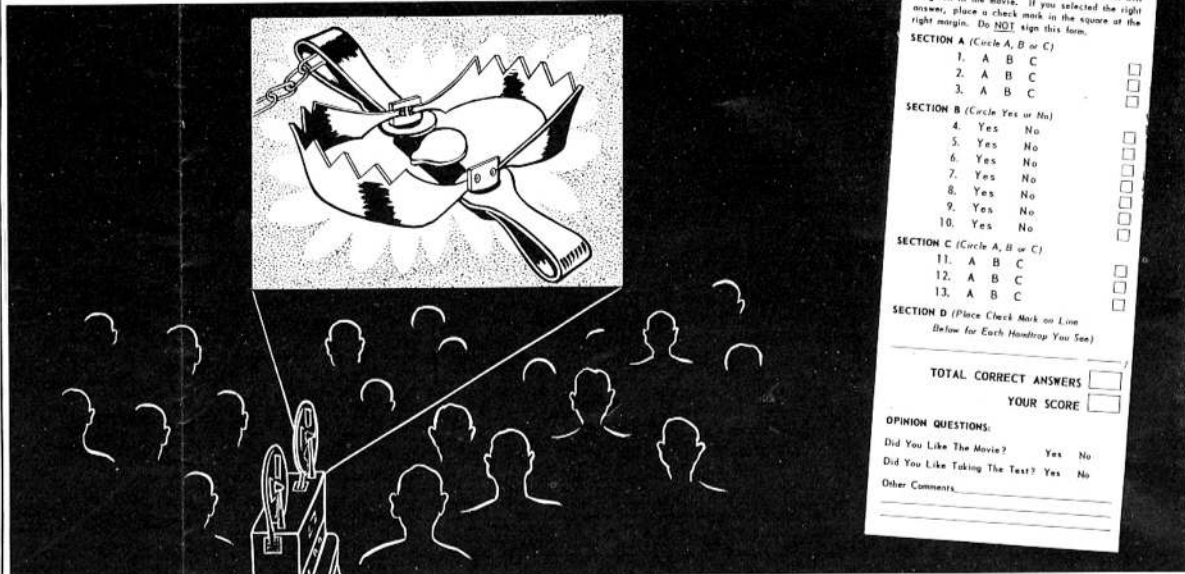
Scrappers Take First Half of Season Play as Bowlers Gear for Big 2nd Half

The first half of the bowling season of 35 weeks found the Scrappers as "king of the hill." The Scrappers are composed of Jack Weglarz, Bob Douglas, Jim Orazine, Dale Meyers, Scotty Ray, Frank Henson and Joe Hargrove. The new 25 point system of scoring finds the Scrappers with 244.5 out of a possible 400 points, leading the second-placed Pumpers by a mere four points. The

third place Cyclones were 46.5 points away from first slot.

The second half of the season promises to be close and exciting. The fast-improving Cyclones have literally pulled themselves out of the cellar by their boot straps and determined play. The experienced and steady Pumpers are in excellent condition. The Tigers, Ezy-Marks and Googins (who says there is nothing in a name) will

THE "HANDTRAP TEST"



A Pro Football Player Requires Highly Special Uniform and Equipment To Play

by C. O. Hays

The aches and pains had eased up by the middle of the week and it was a real relief when the X-rays had shown that my jaw and collarbone weren't broken, just severely bruised.

As usual, by Friday night the tension began in anticipation of Sunday's game. About the time I'd get to sleep, those two big linebackers would come charging through and nail me for a loss.

I was in a better frame of mind by Saturday morning, because it was evident that my injuries from last Sunday weren't going to be a handicap for tomorrow's game. We (The Big Red) were up against the Giants this weekend and



have a great deal to say as to who will win it all.

Individual performances in the Mid-Point Tournament were credited to A. K. Freels, high game; followed by Tom Mayo and Hugh Vantrees. High series was taken by Jim Ratliff, with Morris Wicker and Manley Fortune in close pursuit.

The members of all the teams extend an invitation to everyone to come out on Thursdays at 5:45 p.m. and see some real good matches, both head-to-head and team competition.

though they had been in a slump lately, I knew that Tarkenton could be slippery as an eel and could bust the game wide open with those long passes, and our offensive line wasn't what it ought to be with those two rookies, but they are coming along pretty well.

Not much sleep again on Saturday night and up early on Sunday morning with butterflies in my stomach. I ate a light breakfast and only liquids for lunch.

By eleven o'clock am dressing out. Am so nervous that I put my shoes on before those tight pants, then have to take them off and reverse the process. The shoulder pads hurt my bruised collar bone, but not so much as to be unbearable. I put my helmet on and one of my superstitions is not to take it off until after the game. Next is to check the weather and make a few practice tosses.

Game time is only a few minutes away, so I go inside and turn on the TV then settle in my easy chair. As the referee signals for the kick-off, I automatically reach up and fasten my chin strap.

You may think it's stupid to wear all this protective equipment just to watch a football game, but if I hadn't been wearing it last Sunday there's no telling what kind of shape I'd be in now. It all began about midway in the second game of the double header, when she rushed in and shouted, "I've had about all the football I can stand!"

Photosynthesis Is Shown In New Commission Film

A new color motion picture describing research in the applications of radioactivity in the photosynthesis process is now available free on loan from the Atomic Energy Commission.

Produced by the Lawrence Berkeley Laboratory, Berkeley, Calif., the 24-minute film is entitled "Controlled Photosynthesis" and depicts the method in which radioactive Carbon 14 is used to determine the series of chemical compounds the plant makes before producing food sugars by photosynthesis, the process whereby plants convert the sun's energy into chemical energy.

The film includes discussions of some current enzyme research with promise for increasing the production of protein in plant leaves. Also featured is an interview with Dr. Melvin Calvin of the Lawrence Berkeley Laboratory, who was awarded a Nobel Prize in 1961 for his research with radioactive tracers on the transformation of raw chemicals into plant sugars.

The film is designed for easy understanding by nontechnical students and the general public.

SCORES HOLE-IN-ONE

Walter L. Wilkins, ex-fabrication Shop layout man, scored a hole-in-one at the Glennbrook Golf Course in Houston, Tex. Wilkins, who now divides his time between golf, hunting and fishing, gets back to Paducah ever now and then. It is suspected that he may live in Texas, but Paducah is home.

310 Youngsters Enjoy Santa's Paducah Visit

A total of 310 Carbide youngsters between the ages of two and nine, accompanied by fathers, mothers, sisters, brothers, and in some cases, grandparents, attended the Paducah Plant's annual Christmas Party at the Arcade Theater in Paducah.

Cartoons ranging from "The Littlest Angel" to the slap-stick of the Three Stooges were enjoyed by young and old alike. A Merry Christmas package was enjoyed also by each child.

Old Santa was present to hear the good conduct pleas, and to listen to Christmas morning gift requests. As shown in the accompanying pictures, this part was met with mixed emotions ranging from, "I like you, Santa, but not so close up," to "What am I doing here in the first place?"



Santa visits Paducah Union Carbide children's party



ADDITIONAL CERTIFICATIONS—More ORGDP engineers are certified in recent ceremonies in Oak Ridge, receiving their Professional Engineering License Certificates from the State of Tennessee. In the front row, from left, are Rod D. Shaffer, James F. Crawford, W. Dan Palmer, and William G. S. Fort. In the second row are Sylvan Cromer, who made the presentations, Frank J. Moron, and Thomas P. Wicker.



ATTAINMENT CERTIFICATES—Hugo K. Hughes and Milard J. Gibson receive certificates of attainment after completing a course in the fundamentals of planning and estimating maintenance work conducted by the Maintenance Engineering Department. The course covered detail planning of typical maintenance jobs, communication writing, and the application of standard time data. Pictured from left, are Larry A. Studinger, Division Superintendent, Hughes, Gibson, and Woodey S. Byards, instructor.

From Our Retirees

This is just a note to tell all of you how much I appreciate the gift you gave me for my retirement. I am getting some long wished-for tools. More than the gift, I will always be thankful for the lasting friendships and wonderful people who have remembered me in so many thoughtful ways. I wish I could be there personally to thank all of you.

Earl J. Hutton

I wish to thank all of my K-25 friends for my many wonderful and useful presents.

Annie White

On the first day of spring my true love gave to me—five packs of seed, four sacks of fertilizer, three cans of weed killer, two bottles of insect spray and a pruning knife for the pear tree.

Oak Ridge Gaseous Diffusion Plant

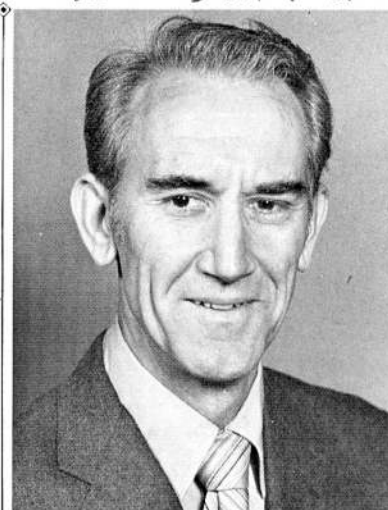
ORGDP Editor Doug Carter
extension 3-3017

WANTED Rides Car Pools

WILL JOIN CAR POOL from Lenoir City to Portal Five, 8 to 4:30. Gary Conner, plant phone 3-3297, home phone Lenoir City 986-8818.

WILL JOIN CAR POOL, or Ride Wanted from Fountain City to Portal Four, 7:45 to 4:15 shift. C. P. O'Brien, plant phone 3-3031, home phone Lenoir City 687-3674.

RIDE WANTED from vicinity of 107 Ogden Circle, Oak Ridge, to K-1007 area, straight day. Jim Amburgey, plant phone 3-3226, home phone Oak Ridge 482-4672.



Mendle B. Phillips

Cascade Maintenance Names M. B. Phillips Maintenance Foreman

Recently named a maintenance foreman in Cascade Maintenance is Mendle B. Phillips.

Phillips came with Union Carbide in 1952, and has worked in Y-12 as well as Oak Ridge Gaseous Diffusion Plant. He was with General Motors and U. S. Steel before coming to ORGDP.

He lives at 126 Wainwright Road, Oak Ridge. Mrs. Phillips is the former Elsie Keeton of Oneida. They have a son and daughter, Charles and Linda Barton, Arlington, Tex., and another son Leslie in Robertsville Junior High School.

Phillips enjoys fishing and spectator sports in his spare time.

25-Year Veterans December



F W BEAN M B LIVESAY

K-25 Credit Union Sets Annual Meet January 24

K-25's Credit Union will hold its annual meeting Monday, January 24, at 7:30 p.m., at the O&CW Union Hall, Raleigh Road, in Grove Center, Oak Ridge.

Refreshments and door prizes will be given to every person attending.

Officers are to be named, and the report of activities for the past year will be given. Every member is urged to attend this the only full membership meeting of the year.

SAFETY SCOREBOARD

ORGDP

Has Operated

**3,260,000 Safe Hours
Through December 30**

Since last disabling injury on May 4



Oak Ridge Gaseous Diffusion Plant employees have Christmas dance

Oak Ridge National Laboratory

ORNL Editor Martha Goolsby
extension 3-6421

71-1952



ENGINEERS CERTIFIED—More Oak Ridge National Laboratory engineers receive Professional Engineering License Certificates at a recent meeting of the TSPE. From left are Henry B. Piper, Harry G. Arnold, Jack R. McWherter and Fred L. Hannon.

January Retirees Total 209 Years UCC Service

Ten ORNL employees will be taking normal or early retirement at the end of January. They are Doris W. Coughlen, Hugh E. Felts, Katherine Hipshire, John A. Kaserman, Pollye D. Larue, Oscar F. McClendon, E. I. Prim, Douglas A. Ross, Marjorie C. Shipe, and Garner B. Walker. Among them, they total over 209 years of company service.

See the January 27 issue for retirees not pictured here.

Katherine Hipshire is head nurse in Health Division. She completes 26 years of company service this month before her retirement. She lives on Route 20, Oak Ridge Highway, in Knoxville. 0844-71 96891



Kate Hipshire Pollye LaRue

Pollye D. Larue, a nurse in Health Division since March 1944, lives at Route 2, Ferndale Road, in Knoxville.

Garner B. Walker came to ORNL in August of 1945. A carpenter in Plant and Equipment Division, he lives at 103 Milton Lane in Oak Ridge. 98304



Walker McClendon

Oscar F. McClendon, a skilled laborer in Plant and Equipment Division, came to ORNL in November 1944. He lives at 3350 Tellico Street in Madisonville.

Congratulations and best wishes to all who retire in January.

Company 20-25-30 Service

Employees who celebrate 20 and 25 years of company service in January are as follows:

25 YEARS

Stanley F. Carson, Lester C. Templeton, Wallace W. Whitehouse, Perry W. Hembree Jr., George W. Robinson Jr., Carl T. Cooper, Stanley R. Dinsmore, James C. Ledbetter, Edward Brewster, H. Brooks Graham Jr., Joe L. Neal Sr., Sherman K. Swann, James H. Bridges, Robert E. Jones, Roy L. Towns, James R. Morris, Henry Zeldes, Clyde R. Sellers, Russell V. Foltz.

20 YEARS

John G. Moore, Bernard J. Sturm, Dvon Brogan, Clarence T. Thompson, Gus E. Testerman, Joseph L. Matherne, Melvin G. Willey, P. H. Geldmeier, Helen R. Clark, Tina P. Bacon, Bobby L. Logan, John H. Pemberton, James E. Brewer, John H. Moore, John W. Dye, Gary M. Henderson, Beryl W. McCollum, Stanley R. Ashton, Hubert W. Cagle, Ethel L. Cagle.

Credit Union Annual Meet Set by ORNLers

The 24th Annual Meeting of the ORNL Employees Federal Credit Union will be held January 31 at 7 p.m. at the Oak Ridge Civic Center, the Shep Lauter Room.

Registration for door prizes will begin at 6 p.m. and should be completed by 7 p.m. Prizes include a Panasonic AM-FM Stereo Radio and Tape Player, one one-hundred bill, two fifty dollar bills, a drill kit, an ice cream freezer, a blender, an electric skillet, stainless tableware and smoked hams. **You must be present to win.**

A nominating committee, Fritz McDuffie, James Keeton and Robert McNees, will present a slate of nominations for the positions to be filled on the Board of Directors and the Credit Committee. Nominations may also be made from the floor if the nominee has given permission for his name to be placed in nomination.

Liverman Witnesses Washington Signing Of 1971 Cancer Act

Associate Director James L. Liverman traveled to Washington at the request of the White House for the December 23 signing of the 1971 Cancer Act.

In his position as Associate Director for Environmental and Biomedical Sciences, Liverman supervises the cancer research which is done at ORNL. This includes work in Biology Division and the Molecular Anatomy Program.

The Act authorizes \$1.59 billion to be spent on cancer programs during the next three years, a presidentially-appointed panel to monitor the program, exclusive approval from the President for the National Cancer Institute budget. (NCI will administer the program under the auspices of the National Institutes of Health), an advisory board, and 15 new cancer institutes in the U.S.

In his December 17 "State of the Laboratory" address ORNL Director Alvin M. Weinberg said that ORNL plans to make a joint proposal with three other local institutions for a cancer research institute in the Knoxville-Oak Ridge area. He said: "When capabilities (at ORNL) are added to those at ORAU and at University of Tennessee Memorial Hospital and the UT biological science departments, one has the potential for an impressive cancer center."

"ORNL has therefore cooperated with these three institutions in proposing that such a center be established in the Knoxville-Oak Ridge area."

Doctor of Jurisprudence Degree to J. C. Bresee

Civil Defense Project Director James C. Bresee is now a Doctor of Jurisprudence as well as a chemical engineer. He was graduated from The University of Tennessee Law School during winter commencement. He has worked part time on the degree since 1967 and graduated with honors.

Bresee joined ORNL's Chemical Technology Division in 1954. He holds three degrees in chemical engineering, the B.S. and M.S. from the University of Illinois and the Sc.D. from Massachusetts Institute of Technology.

In 1964 he became Project Director of Civil Defense Research. Also he directs ORNL's research for the Department of Housing and Urban Development.

He is a member of the American Institute of Chemical Engineers, Phi Kappa Phi and the committee on Social and Behavioral Urban Research for the National Academy of Science.

Patents Received

ORNL employees have recently received these patents:

Joseph P. Hammond and Ji Y. Chang for a "Process for Producing Dispersion-Hardened Superalloys by Internal Oxidation."

Fletcher L. Moore for the "Isolation and Purification of Americium from other 5f and 4f Elements by Extraction Chromatography."

Donald L. Kau, Forrest N. Case and David E. Smiley for a "High-Pressure Radiolytic Oxidation of Cyclohexane."

Klaus H. Becker, Richard B. Gammage, Joseph S. Cheka, and Eddie M. Robinson for "High-Sensitivity Stimulated Exoelec-



A VISIT FROM A PRINCE—Prince Faisal of Saudi-Arabia visited ORNL on December 27 for briefings with Phillip Hammond, Director of the Nuclear Desalination Program, and other Laboratory officials in nuclear desalting and agro-industrial research. Associate Director Frank Bruce hosted a luncheon for the Prince following briefings and tours to Laboratory facilities. Left to right Prince Faisal, John Michel, Phillip Hammond, and Reuben McCord.

WANTED

Rides
Car Pools

RIDE from Inskip-Norwood area to East Portal, either shift. Sharon Rader, 3-1506 or 687-8975.

RIDE from Fountain City (Colonial Circle Drive) to East Portal, either shift. Linda Hickman, 3-6272 or 687-9197.

RIDE from Fountain City area to East Portal, either shift. Lucille Ralston, 3-6324 or 688-4863.

CAR POOL MEMBER from Pennsylvania, Hillside area to West Portal, 8 a.m. Hubert Oliphant, 3-6886 or 483-1549.

RIDE or join car pool from Washington Pike area of Knoxville to East Portal. Steve Makres, 3-1421 or 522-5692.

Safety Awards Coming To Lab in Mid-February

It's almost time for another safety award. Through November there were four disabling injuries and 35 serious injuries. It is anticipated that there will be four periods of 1,000,000 man-hours without a disabling injury. The greatest number of award months lost by any group is three. Hence, the award earnings should vary from \$8.50 to \$10.

Awards will be in form of gift certificates with face value 15 percent above the earned values. The certificates can be redeemed for merchandise or applied to charge accounts at J. C. Penney and The Knox in Oak Ridge or Almart and The Knox in Knoxville. There will be no cash refunds.

The certificates are transferable by endorsement and can not be replaced if lost, stolen, or misplaced. They must be redeemed by June 30, 1972.

It is expected that the certificates will be distributed by mid-February 1972.

tron Emission Radiation Dosimeters."

Paul A. Haas and Sam D. Clinton for a "Method for Preparing Oxide Gel Microspheres from Sols."

Photo Cross-Overs

Nuclear Division News regrets an inadvertent slip-up in printing operations which caused the names and pictures of four of the December retirees to get mixed up in the December 16 issue. Here they are again, this time, we hope, correct.

Tip Arnwine, a senior lab technician in Reactor Division.

2710 9552



Arnwine Frisbie

John B. Frisbie, a maintenance foreman in Instrumentation and Controls Division.

Edward J. Greeley, a glass blower supervisor in Plant and Equipment Division.



Greeley Harrill

Charles S. Harrill, Associate Director of Instrumentation and Controls Division and superintendent of the Instrument Department.

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6%

for third consecutive quarter.

Analgesic Abuse

By T. A. LINCOLN, M.D.

Over-the-counter pain killers are much abused throughout the Western World. Few people are aware of the potential hazards associated with the excessive intake of aspirin, phenacetin (acetophenetidin), acetaminophen and other mild analgesics. Many consume large numbers of pain pills, thinking they are harmless. In spite of all the blandishments which appear on TV commercials, everyone should realize that these drugs are potentially toxic, even when taken as directed.

Consumption 'Fantastic'

The consumption of aspirin in the United States is fantastic. The equivalent of approximately 65 to 70 million tablets are consumed each day. If you wonder how the drug companies can afford their commercials, consider the gross income from such sales. The retail price per tablet varies considerably, but in the smaller size bottles or boxes it usually is about 1.5 cents per tablet. If one allows only 1 cent per tablet, this represents about 700,000 customer dollars a day, or over \$250,000,000 per year. If one adds the sales of numerous combination tablets, usually at an increased price, the sales reach huge proportions.



Dr. Lincoln

In Great Britain, it has been estimated that 250,000

people are consuming five or more analgesic tablets per day without any advice from their doctors. The annual sales over the counter amount to about 36 million American dollars.

Many of the analgesic tablets contain aspirin, phenacetin and caffeine, or various mixtures of aspirin, acetaminophen, salicylamide and various antacids.

Most people get started on pain killers for relief of tension headaches. They already have a low tolerance for pain and seek immediate relief for their distress. Others take pain killers for fatigue, muscular aches, inability to concentrate, insomnia, and to get a psychological lift. Television commercials have created a new syndrome called the "blahs," which is apparently anything which makes one feel less than tip-top. The treatment, of course, is an aspirin-antacid combination.

Apparently with advertising encouragement those people who are anxious, depressed or immature, and who have a low stress tolerance, increasingly resort to aspirin or analgesic mixtures. Abuse has been defined as an average daily consumption of .8 gms phenacetin, .16 gms caffeine and 1.1 gms aspirin daily for at least three years. Converted to tablets of APC or similar mixtures, such consumption would amount to five tablets a day. Frequently abusers will take 25 to 100 tablets a day.

Stomach Damage

The greatest risk from excessive aspirin intake is gastrointestinal bleeding. In one study done in England, 25 percent of admissions to the hospital because of gastrointestinal bleeding were blamed on analgesics — primarily aspirin. Aspirin has been considered as a major cause of gastric ulcers. In another study, six percent of iron deficiency anemias were due to analgesics.

Thirteen of sixteen patients examined gastroscopically after taking aspirin showed reddening of the stomach lining and one had obvious bleeding. Aspirin also causes an increase in the bleeding time, which by itself may not be too significant, but when combined with local irritation can cause hemorrhage. Aspirin appears to inhibit the aggregation of platelets which are necessary to form a clot. The platelets lose their stickiness.

Analgesics, particularly phenacetin, can cause serious kidney damage. Admittedly, the dose to cause uremia is large. Usually 12 or more tablets per day for 12 or more years are necessary (over 50,000 tablets). However, evidence of serious effects have been seen with much smaller amounts. The kidney damage is not an all-or-nothing effect. Analgesic damage can also aggravate other kidney diseases.

Can Cause Brain Damage

Analgesics, especially those containing phenacetin, can cause organic brain damage. Aspirin taken by women early in their pregnancies can increase the likelihood of congenital



DOING WHAT THEY 'OTTER.' The two sea otters at play in the photo are part of the 600 otters which the Atomic Energy Commission helped the Alaska Department of Fish and Game and the U. S. Department of the Interior's Bureau of Sport Fisheries and Wildlife transport from Amchitka Island in the Aleutians. While AEC nuclear test work on Amchitka has not disturbed the otters, the otters themselves threatened to over populate their island home. In an effort to save the otter population, Alaskan wildlife experts asked the AEC to fly some of the animals from Amchitka to other locations on the Alaskan shores where food is plentiful, but otters not. (Photo by Klinkhart, Alaskan Department of Fish and Game.)

Investment Club Meeting

Is your investment club losing money? Are you investing personally in the wrong stocks? What do you know about real estate investment trusts? If this is a new field, you can learn how to deal in this profitable investment area.

Donald E. Conner, vice president of Higgs, Inc., will speak on "Understanding Real Estate Investment Trusts" at the monthly meeting of the East Tennessee Council of the National Association of Investment Clubs. The meeting will be held at the Knoxville State Area Vocational Technical School, 110 Liberty Street, Knoxville, Tuesday, January 18, 7:30 p.m. The public is invited to attend.

defects. Aspirin is the most common cause of accidental fatal drug poisoning in children. Many people are allergic to aspirin and other analgesics and can experience severe reactions. Excess intake can also damage hearing.

The incidence of gross analgesic abuse has been estimated at about 1 per 10,000 population, or about the same as narcotic addiction. Mild abuse is so common and toxic reactions so frequently unrecognized that no reliable estimates are available. How many people do you know who take more than 10 analgesic tablets each day? How many take five or more per day frequently?

Aspirin is one of the most valuable medicines available. Under careful medical supervision, relatively large doses can be taken for treatment of rheumatoid arthritis. Most people, however, should follow the rule that no medicine should be taken continuously unless prescribed and followed by a physician.

Pain is a valuable protective mechanism. Suppressing it for trivial reasons is irrational. If possible, non-pharmaceutical solutions to life's problems and pains should be sought. When unsuccessful, use of analgesics should still be kept to a minimum.



SPORTS NOTES



All Carbide

Come on out and see some of the Carbide Basketball leagues play. Right now there are some hot contests going on. In the Atomic League the Shoestrings and the G B U's are neck and neck with perfect records. It's the same in the Nuclear League. The Dead-eyes and the Carbide Trojans are vying to keep their perfect records.

The Hawks and the Pack are leading the Carbide Volleyball League. Neither have been defeated.

ORNL Bowling

First half finals in A League left Eagle Eyes in first place. Following in order were ORAU, Cellular Dwellers, Late Comers, Pee Wees, Punops, Half Frames, Ten Pins, Tailenders, Pockets, Pour-It-Ons and the Good Guys finished last! In league play on December 20, Eagle Eyes rolled a 2,901 handicap team series. Honors went to Jack Monenhun of Cellular Dwellers with a 683 high series with handicap. Ray Walker of Pockets with a 278 high game with handicap and Bill Johnson

of Eagle Eyes with a 228 high scratch game.

Y-12 Bowling

Splinters of the Classic League finished up first half competition out front by a point and a half. Clyde Craven of Bumpers rolled a 267 high scratch game and Bill Ladd of Eightballs a 686 high series scratch to garner league honors in December 16 play.

The Rollers rolled by the Alley Cats for three points in final first half action, to cop honors in the Mixed League's initial period. The Rollers, Ann and C. R. Lively, Wanda and Jay Sewell, eked out a one-point lead from the Cats. The men and women's league began second half action this week.

The Badgers took first place in first half rollings in the big C League. They were three points ahead of the Sunflowers, who were only one point away from the third-placed Rounders. Tom Hillard, Rounders, rolled high game for the first half, a 253 scratch single!

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Steam Cars to be Topic At ASM-ASCET Meeting

The Oak Ridge Chapter of the American Society for Metals will hold a joint meeting with the local chapter of the American Society of Certified Engineering Technicians Wednesday, January 19, at the Oak Ridge Country Club.



Hise

Speaker will be Eugene Hise with the Reactor Division, ORNL, and founder and past president of the Mobile Steam Society. Hise's subject will be "Steam Cars, Past and Present and Future." This will be an illustrative discussion of the history of steam autos and current developments with emphasis on metallurgy.

Hise is a graduate of Georgia Tech and has worked on several Reactor Division projects such as the MSRE and Desalination. He is currently on the NSF study group on Environmental Affairs.

The meeting begins at 6:30 p.m. with a social hour, followed by a buffet dinner. Hise's talk will be at 8. The meeting is open to the public and ladies are invited to attend. Reservations from non-members should be made through E. E. Bloom, extension 3-1608, by January 17.

Bloodmobile Visit Set For Early February

The Bloodmobile is coming to Oak Ridge soon! Due to a mix-up, the bloodmobile missed its Fall appointment in Clinton. Thus, the quota will be 542 pints for the February 2 and 3 visits.

The hours will be the same as the last visit . . . on February 2, from 4 to 10 p.m., and on February 3, from 11 a.m. to 5 p.m. The Oak Ridge Armory on the Turnpike will be the locale.

Red Cross officials hope the extra quota can be met to make up the 172 pints that were missed when the appointment in Clinton was not kept.

Plan now to donate a pint of blood on February 2 or 3.

Calendar

TECHNICAL January 10

General Engineering Division Seminar: "The Evolution of Air Pollution, Rules and Regulations," Kenneth A. Noll, University of Tennessee. East Auditorium, Building 4500N, 1:30 p.m.

Mathematics Division Seminar: "Structural Aspects of Mathematical Modeling and Ecological Communities," S. A. Levin, Cornell University. East Auditorium, Building 4500N, 3:30 p.m.

COMMUNITY January 14

Oak Ridge Playhouse presents "In the Matter of J. Robert Oppenheimer." Oak Ridge Playhouse 8:20 p.m. Other performances, January 15, 21, 22, 28 and 29.

January 16

The Art Center Film Club presents "Potemkin," a film produced in 1925 by Russian director Sergei Eisenstein. Jefferson Junior High Little Theatre, 8 p.m. Admission: adults \$1.50; students \$1.

United Fund Annual Meeting Set January 11

The Anderson County United Fund will hold its annual meeting Tuesday, January 11, at 7:30 p.m. in the Circuit Court Room of the Anderson County Courthouse, Clinton. Everyone who contributed to the Anderson County United Fund is urged to attend this important meeting.

President Ted Shapiro will give his annual report, and member agencies will also report.

Awards of Merit

ORNL has received two AEC Awards of Merit for outstanding employee safety records. The first covered a period from October 1969 through April 1970 which totaled 3,322,364 injury-free man hours. The second for 2,488,194 man hours without injury from April 1970 through September 1970.

Rust Engineering Company also received a merit award for a nine-month injury-free period.



ARTS COUNCIL SUPPORT—Roger F. Hibbs, President of the Nuclear Division, presents the Oak Ridge Arts Council a check from Union Carbide Corporation for support of the Council's efforts to strengthen the cultural life of the community. Stan Leibo, right, president of the Arts Council, and a staff member of Oak Ridge National Laboratory's Biology Division, accepts the corporate gift.

Oppenheimer Drama To Open January 14

The next Oak Ridge Playhouse production should be of interest to Oak Ridge audiences. The play is "In the Matter of J. Robert Oppenheimer," and is based on the records of the proceedings which were instituted against the world-famed scientists by the Atomic Energy Commission in 1954 to see if Oppenheimer should retain his security clearance. The answer is well-known—he was considered a security risk and was removed from all governmental positions of trust or influence.

The play opens Friday, January 14, at 8:20 p.m. and will continue January 15, 22, 28 and 29. Tickets may be reserved by calling Oak Ridge 483-1224.

David Sundberg, director of public information at Oak Ridge National Laboratory, will play Oppenheimer. Other cast members include Fred Howard, Har-



Sundberg

bers include Fred Howard, Harold Mayberry, Charles Keller, Carl Ludemann, Leo Wade, Kirk Dickens, Harley Ross, Jim Dumont, Tom Huffstetter, Art Dworkin, Dick Lyon, Jim Weir and Ernest Silver.

Although the hearings took place some 17 years ago and Oppenheimer himself has since been restored somewhat to a favorable position in the eyes of his government with the presentation of the Fermi Award, the basic controversy still remains—was he really a security risk? Oppenheimer had enduring love for America which he expressed over and over again, but according to some, he made some wrong moves, especially in light of his former affiliations. The play presents in dramatic form both sides of the story, but it is still questionable today whether the charge against the scientist was legitimate or simply the result of personal enmity be-

Holiday Accident Fatal To Purchasing's J. Day

Joel W. Day, Purchasing Department, died December 24, from injuries sustained in an automobile accident in Oak Ridge. He came with Union Carbide June 6, 1960.

The Day home is at 147 Cumberland View Drive, Oak Ridge.



Mr. Day

Survivors included his wife Mrs. Kathleen Day, and children, Kimberly, Joey and Paul. His parents, Mr. and Mrs. Claude W. Day, Oak Ridge, also survive. Funeral services were held at Weatherford's Chapel with the Rev. James Winter officiating. Masonic memorial services were also held there. Interment followed in the Anderson Memorial Gardens.

A. Fraas, Reactor, Speaks On Environment Problems

The next Nuclear Safety Seminar is scheduled for 9:15 a.m. Thursday, January 20 in the East Auditorium, at ORNL. A. P. Fraas, Reactor Division, will speak on "Thermonuclear Reactors and their Environmental Considerations." Currently, six different approaches are being taken toward the development of thermonuclear power plants. These approaches differ widely in safety problems and in potential environmental effects.

Fraas recently represented the United States at a conference on thermonuclear power in Vienna, and will review some of the concepts presented at that meeting.

The next seminar will be held February 17 when John M. Waage, Gulf General Atomic Corporation, will discuss gas-cooled reactors.

tween him and other men of influence.

AEC Lets Contracts For Fire Protection

The Atomic Energy Commission has awarded contracts totaling more than \$273,000 to two firms for design and construction of certain fire protection equipment and facilities at the AEC's Y-12 Plant.

General American Field Erection Corporation, a subsidiary of General American Transportation Corporation of Chicago, was awarded a \$249,598 contract for design and construction of two two-million-gallon capacity water storage tanks.

A \$23,577 contract for design and installation of sprinkler systems for cooling towers at the plant was awarded to Automatic Sprinkler Corporation of America in Knoxville.

Work under both contracts, which were awarded on the basis of competitive bids, is scheduled to begin this month. Installation of the sprinkler systems is set for completion in mid-April 1972, and completion of the water storage tanks is expected in June 1972.

The two projects are part of an overall modification of fire equipment and facilities at Y-12.

Junior Playhouse Sets Tryouts for January 22

Tryouts for the Junior Playhouse production of "Mr. Popper's Penguins" will be held Saturday, January 22 at 11:30 a.m. in the Oak Ridge Playhouse in Jackson Square. The play has a very large cast, and all adult parts (eight boys, two girls) will be played by junior high and high school students. Director Marguerite Ebert is also looking for an assistant director for this group. Four children are required between the ages of 10 and 13, two boys and two girls. Children eight years and up will be cast as penguins, especially those with acrobatic abilities. About a dozen are required (evenly divided between girls and boys).